

CLAIMS

1. Method of processing seismic data acquired by
5 means of a sensor having at least three geophone
components, characterized in that estimators are
determined which are combinations of these components
making it possible to isolate the various data
10 depending on whether they correspond to propagation
with reflection or with conversion and in that, to
determine a sensor reconstruction, the operators to be
applied to the various components of the sensor are
determined in such a way as to minimize the deviation
15 between reference data and data obtained by applying
the estimators to the sensor reconstruction, the
operators thus determined being applied to the data
acquired.
2. Method according to Claim 1, in which, the sensor
20 furthermore including a hydrophone, the reference data
for reconstructing a vertical geophone are derived from
the data acquired by the hydrophone.
3. Method according to Claim 1, in which the
25 reference data for reconstructing a vertical geophone
without hydrophone or for reconstructing horizontal
geophones are derived from the application of the
estimators to one of the geophones of the sensor.
- 30 4. Method according to Claim 1, characterized in that
the orientation in the horizontal plane of a geophone
component is obtained by minimizing the estimator of
the transverse reflection.
- 35 5. Method according to one of the preceding claims,
characterized in that the estimators are determined as
a function of a model of isotropic propagation or
including the azimuthal anisotropy.

6. Method of processing seismic data acquired by means of a sensor having at least three geophone components, characterized in that estimators are
5 determined which are combinations of these components making it possible to isolate the various data depending on whether they correspond to propagation with reflection or with conversion.